DECISION RECORD

EA LOG No. OR-010-2002-07

Project Name: Drake and Parsnip Projects

Applicant: Lakeview BLM

Address: 1301 South G St
Lakeview, OR 97630

County: Lake

BLM Office: Lakeview District

Phone: 541/947-2177

Decision Record

Decision: The following is the decision of the Bureau:

Construct exclosure fence to remove grazing on Drake Creek in the Thompson Pasture of the 0206 allotment. Cut juniper in the Roaring Springs and Drake Creek area. Stabilize head cuts with rock structures and biomechanical engineering on Drake Creek and Parsnip Creeks.

Rationale:

The objectives of the proposal are to improve stream channel stability, improve ground cover for better watershed conditions, restore aspen stands and optimize riparian vegetation condition.

Drake Creek is not responding positively to the present management as evidenced by a stream channel with a poor width to depth ratio. Soil compaction is elevated as evidenced by rooting depth less than associated with a stream in good condition. Prescribed grazing should be adequate to improve conditions but has not been successful. Unauthorzed use and higher than expected use levels have impacted willows and set condition back several years.

There are three headcuts on Drake Creek and three on Parsnip Creek. As the headcuts migrate up stream they tend to drop the water table, increase width to depth ratio and remove soil down to less erosive material in the channel. To protect the better condition reaches of stream, the headcuts need to be stabilized.

Western juniper cover is increasing in the RS and Drake Creek canyons along the stream. Remnant aspen stands can be noted under several of the juniper stands. Some areas have little grass or forb under story left beneath the juniper canopy and others are showing the signs of moving to a community with less under story. The area proposed for juniper management fell within the Priority 1 zone for fire management priority in the Deep Creek Watershed Assessment (Fremont National Forest/Bureau of Land Management, July 1998)

Thomas E. Rasmussen

Tom Rasmussen, Field Manager
Lakeview Field Office

6/25/03
Date

FINDING OF NO SIGNIFICANT IMPACT

Drake and Parsnip Creek Riparian and Watershed Enhancement

EA# OR-010-2002-07

The Bureau of Land Management, Lakeview District, Lakeview Resource Area, has analyzed a proposal and several alternatives to construct livestock exclusion fence, control juniper and stabilize headcuts along portions of Drake, Roaring Springs Fork and Parsnip Creeks. The objectives of the proposal are to improve stream channel stability, improve ground cover for better watershed conditions, restore aspen stands and optimize riparian vegetation condition. Headcuts have destabilized two reaches of stream channel; one on Drake Creek and one on Parsnip Creek. Grazing has caused soil compaction along one reach of Roaring Springs Fork and has contributed to the loss of willow cover along the stream. Juniper has increased in density and range within the canyons of Drake Creek and Roaring Springs Fork and reduced ground cover and eliminated aspen stands in the canyons

This project is in conformance with the Warner Lakes Management Framework Plan and Integrated Noxious Weed Control Program EA. There are no, wilderness, wild and scenic rivers, known hazardous waste areas, areas of religious concern, or prime or unique farmlands in the immediate project areas. No significant or disproportionate impacts would occur to low income or minority populations. The risk of noxious weed infestation would be low. There are water, fisheries, wetlands and floodplain resources in the project area that will be beneficially affected by the projects, but not on a regionally significant scale. Neither adverse nor beneficial impact is anticipated to air quality, lands, minerals and energy resources. Surveys found no threatened or endangered plants or animals, and found no cultural or paleontological resources in the proposed project areas.

On the basis of the analysis contained in the attached EA and all other available information, my determination is that none of the alternatives analyzed would constitute a major federal action which would adversely impact the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is unnecessary and will not be prepared.

for Robert D. Hyman

Thomas E. Rasmussen, Manager
Lakeview Resource Area

19 Apr 03

Date

Drake and Parsnip Creek Riparian and Watershed Enhancement

EA Number: OR-010-2002-07

PROJECT LOCATION: (see attached maps).
On the Roaring Spring Fork of Drake Creek, Upper Drake Creek and Parsnip Creek

BLM OFFICE: Lakeview Resource Area, Lakeview District

LEASE/SERIAL/CASE FILE #: N/A

APPLICANT (if any): N/A

CONFORMANCE WITH APPLICABLE LAND USE PLAN: This proposed action is subject to one or more of the following land use plans.

Name of Plans: Warner Lakes Management Framework Plans (MFPs), as amended (1982, 1983, 1989, and 1995), Lakeview Grazing Management FEIS and ROD (1982), Oregon Wilderness FEIS and ROD (1989 and 1991), Wilderness Interim Management Policy (1995), Vegetation Treatment on BLM Lands in Thirteen Western States FEIS and ROD (1991), Supplement to the Northwest Area Noxious Weed Control Program FEIS and ROD (1987), Integrated Noxious Weed Control Program EA #OR-013-93-03 (1994), Lakeview District Fire Management Plan - Phase 1 (1998), Rangeland Reform >94 FEIS and ROD (1995), and Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington (1997).

Remarks:

PURPOSE and NEED FOR ACTION:
The objectives of the proposal are to improve stream channel stability, improve ground cover for better watershed conditions, restore aspen stands and optimize riparian vegetation condition. This is a multi-project EA covering proposed actions in a general geographic area. Proposed work includes fencing to exclude livestock from the Roaring Springs Fork (RS) and Drake Creek, stabilization of head cuts using biomechanical or rock structures on Drake and Parsnip Creeks and juniper management along RS and Drake Creek.

Livestock grazing has been authorized along the RS and Drake Creek as a part of the Thompson Pasture of the 206 allotment. The grazing schedule of use is alternate years from mid April to the end of May. The stream is not responding positively to this management as evidenced by a stream channel with a poor width to depth ratio. Soil compaction is elevated as evidenced by rooting depth less than associated with a stream in good condition. Grazing in 2000, a scheduled grazing year, and 2001, a rest year, was greater than expected with the use in 2001 being heavy. Willows were impacted and condition set back several years. More strict control of grazing is needed to allow recovery of the stream.

There are three headcuts on Drake Creek and three on Parsnip Creek. As the headcuts migrate up

stream they tend to drop the water table, increase width to depth ratio and remove soil down to less erosive material in the channel. To protect the better condition reaches of stream, the headcuts need to be stabilized.

There are three headcuts on Drake Creek. This is the second. There are deeper soils above the cut and the flood plain is more accessible. Below the cut, there are more boulders that were exposed from the erosion. The head cut appears to be moving slowly upstream.

Western juniper cover is increasing in the RS and Drake Creek canyons along the stream. Remnant aspen stands can be noted under several of the juniper stands. Some areas have little grass or forb under story left beneath the juniper canopy and others are showing the signs of moving to a community with less under story. The area proposed for juniper management fell within the Priority 1 zone for fire management priority in the Deep Creek Watershed Assessment (Fremont National Forest/Bureau of Land Management, July 1998)

Juniper has out-competed this aspen stand. Note the young aspen on the edge of the juniper and the remnant aspen logs

The dominant vegetation along the rims of Drake Creek is juniper. There is little understory left in stands that are this dense. The lack of understory can lead to increased erosion and sedimentation in the adjacent stream.

DESCRIPTION OF PROPOSED ACTION:
Construct 3.5 miles of fence on the west side of RS and Drake Creek. Provide for livestock water access to RS in one place. While fencing is primarily needed, some portions of the rim would be effective as a livestock barrier and where feasible, the rim will be used to exclude livestock from the stream. Two gaps in the rim will require short sections of fence to assure a livestock barrier. The purpose of the fence is to exclude livestock use on 4.9 miles of stream.

On the three Drake Creek headcuts, a combination of various biomechanical methods would be used to prevent further upstream and lateral movement. Hand crews would place geotechnical fabric and plant willow bundles over the actively eroding area. The willows would be hand clipped from areas near the project, using up to a 50% cover removal**.** If additional willow material is needed, it will be collected from other areas in the Deep Creek Watershed.

Juniper near the stream bank would be placed with a backhoe. The juniper root wad would remain intact and partially buried along the bank of the creek for stability. Some cut juniper may be placed on the banks as well.

Rock collected on-site would be used to fill the pool at the headcut furthest downstream. A backhoe would be used to both obtain the rock from either side of the creek and fill the pool. Rock would be placed at an angle from the top of the headcut to the downstream side of the pool.

The Parsnip headcuts would be stabilized using rock structures. Rock will come from the existing pit next to the creek or from other existing disturbed areas, such as mineral materials pits on the Fremont Forest. Using a backhoe, the headcuts will be cut back to a lower angle and rock placed in a manner to collect stream flow into a short, steep gradient, armored channel. This will allow energy dissipation in rock rather than in the more erosive soils on the stream. Work would be conducted in compliance with ODF&W in water work guidelines.

Juniper management along RS and Drake Creeks would consist of hand cutting selected trees within the canyon. Sites would be accessed on foot or with ATVs. Up to 95 acres would be treated, but that area includes open meadows, pine stands and rock slopes that would not need

juniper removal. In areas of heavy juniper concentration that have no grass under story, native grass seed would be broadcast prior to juniper cutting. The activity of **c**utting would incorporate the seed into the soil. An estimated 15 acres would be seeded with a mix of Great Basin wildrye, bluebunch wheatgrass and Idaho fescue or other native grasses. Most of the juniper management is within the area proposed for livestock exclusion. Cut juniper will be left on the ground for at least ten years to allow grasses to establish under the cut trees. After this period, prescribed fire may be considered to control new, young juniper.

ALTERNATIVES:

#1) NO ACTION –

No headcut stabilization, juniper management or fence construction/additional riparian livestock exclusion would occur.

#2) ALTERNATIVE 1 –

Only certain aspects of the proposed work would occur. For example only the fence would be constructed without head cut stabilization or juniper management. Also, a reduction in the amount of work under each project type could occur. For example, only the portion of RS and Drake above the confluence could be excluded from grazing.

Elimination of grazing from the pasture without the fences was considered as an alternative, but eliminated from detailed study because it was previously considered in the Lakeview Grazing EIS, as well as, the Proposed RMP/Final EIS.

AFFECTED ENVIRONMENT:

The proposed action area includes the stream and canyons associated with Drake, RS and Parsnip Creeks on BLM lands. These streams are above occupied habitat for Warner suckers, a listed threatened species. The streams are occupied habitat for Warner red-band trout and speckled dace. Drake Creek above RS is intermittent most years, but RS, Drake below RS and Parsnip Creeks are perennial.

Based on proper functioning condition (PFC) assessment completed in July 1996 the stream reach with the head cuts is classified as functional-at risk. There is a risk of the head cut moving and affecting the meadow system. The streams are perennial; except the Drake Creek reaches above the RS fork, are intermittent most years. According to the Rosgen classification system, the stream reaches are variable ranging from C (low gradient, wide channel, coarse cobble substrate), B (moderate gradient, moderately wide channel, coarse cobble substrate, step pool system), and E (low gradient meadow system, narrow channel, fine grain soils) channel types. The areas proposed for head cut stabilization have resulted in a change from E to C types in most cases, with short segments of F (recent event on geologic timescale where access to flood planes are lost) immediately below the headcut.

All of the streams in the project area are listed as water quality impaired by the Oregon Department of Environmental Quality due to excessive temperature.

Soils in the Drake Creek area are on tablelands with broad areas of flat to gentle slopes. The

surface layer is very cobbly loam, and the soils are moderately deep and well-drained. The clay subsoil has slow permeability and a high shrink-swell potential. The hazard of water erosion is moderate.

Soils in the Parsnip Creek area are on North-facing hillsides and mountainsides and benches on tablelands with 15 to 50% slopes. The surface layer is very gravelly on the South side of the stream and very cobbly loam on the North side of the stream. The soils are shallow and well drained. The clay subsoil has slow permeability and high shrink swell potential. The hazard of water erosion for these soils is severe.

Livestock grazing is currently authorized on the Thompson pasture of the Lane plan II allotment, which contains RS and Drake Creeks, on alternate years from April 1 to June 15. Up to 400 AUMs may be taken on the use years (200 head up to 60 days). Grazing is authorized on the Parsnip Seeding pasture of the Hickey Individual allotment, which contains Parsnip Creek, on alternate years from March 15 to May 30. Up to 90 AUMs may be taken on the use years (110 head up to 45 days).

Juniper is scattered throughout the Deep Creek Watershed. There are concentrations along the rims and in the canyons. Juniper is spreading outward from the rims into sage flats and riparian zones.

Drake Creek is within a VRM Class II. The objective for Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. A Visual Contrast Ratings form was filled out for the Drake Creek portion of the project. Project design will seek to blend in with the form, line, color and texture of the existing landscape.

Parsnip Creek is within a VRM Class III. The objective for Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate**.** The Parsnip Creek project will meet the objectives of Class III**.** Visual impacts of construction of the rock structures could be mitigated if the area is rehabilitated, as stated in the EA.

ENVIRONMENTAL IMPACTS:

PROPOSED ACTION:
The potential environmental impacts resulting from the alternatives relative to the following critical resource values were evaluated. The following is a summary of the results:

Critical Element/ Resource Value	Affected Yes	Affected No	Critical Element/ Resource Value	Affected Yes	Affected No
Air Quality		X	T & E Species		X
ACEC/RNAs		X	Wilderness		X
Cultural Resources		X	Wild & Scenic Rivers		X
Farmlands, Prime/Unique		X	Hazardous Wastes		X
Floodplains	X		Water Quality	X	
Native American Cultural/ Religious Concerns		X	Wetlands/Riparian Zones	X	
Low Income/ Minority Populations		X	Noxious Weeds		X

Head cut stabilization will maintain flood plain structure. As the stream downcuts, becoming more incised, floodplain access is lost. Maintaining stream width and bank soils will retain the current active flood plains above the active headcuts. Head cut stabilization will also maintain or improve water quality. As the head cut erodes upstream, downstream the channel becomes wider and shallower which results in increased water temperature. Without head cut stabilization the stream will continue to down-cut, losing water retaining soil in the banks resulting in increased water temperatures.

Filling the pool with rock at the base of the headcut at Drake Creek would aid in stabilization by providing resistance to the head wall to prevent slumping. The rock would also dissipate energy associated with falling water, preventing further downcutting.

Biomechanical remediation methods would also decrease the risk of the head cut moving upstream, bringing the stream from functional at-risk to functional. Juniper and willow used to protect and stabilize the banks would aid in the dissipation of energy in the stream and prevent further downcutting movement.

Use of the backhoe at Drake and Parsnip creeks could cause soil compaction, disturbance, and exposure. Off-road use could be encouraged if the way appears to be driveable by the public. The effects from the backhoe are of particular concern in areas where the soil surface layer is not rocky. At Drake Creek, since most of the proposed project area has a rocky surface, the effects to the soil are expected to be minimal. However at Parsnip Creek, the backhoe would be crossing and working in the active stream channel. Care would be taken to avoid gouging, but if it does occur, the area would be rehabilitated.

Juniper cutting in the Drake and RS areas would increase ground cover and infiltration and aid in soil stabilization.

Livestock exclusion will maximize riparian vegetation condition. Increasing the amount and condition of vegetation would increase the water storage capacity in the stream and increase function in the hyporheric zone. The reduction in grazing effects will primarily be observed on the deeper soil sites with E and C channels located on the upper reaches. The stream on these areas will become more narrow and deeper. There will be a reduction in soil compaction and increase in rooting depth; both conditions will improve vegetation vigor. The exclusion will reduce the chance of unauthorized use by preventing stock from drifting from the uplands into the riparian zone. However, by reducing stream access for livestock to the crossing/gap at RS, there would be an increase in erosion, compaction, and loss of vegetation at this point.

IMPACTS OF THE NO ACTION ALTERNATIVE:
Impacts from no action would include loss of floodplain and riparian habitats as the head cuts migrate upstream. Grazing could continue to result in loss of riparian vegetation vigor and willow cover. Soils could continue to be compacted, causing shallow plant rooting depth. Juniper would continue to dominate the rims above the riparian zone, aspen stands would continue to be lost to juniper competition, and juniper would continue to expand into the riparian zone.

IMPACTS OF THE LIMITED IMPLEMENTATION OF THE PROPOSED ACTION:
Effects would depend on the portion and extent of the proposed action implemented. These effects could be interpreted from the discussion for the proposed action and no action.

DESCRIPTION of OTHER IMPACTS:

CUMULATIVE IMPACTS: The proposed project would increase watershed function in the Deep Creek watershed through an increase in capture, storage, and release of water in the system. Watershed health on surrounding private land is expected to function at some lower level due to poor stream conditions.

Since the proposed project comprises less than one percent of the Deep Creek watershed, the effects on the soil resources at this scale would be minimal. Despite this, the net cumulative effect would be an increase in soil productivity as headcuts are stabilized and juniper is cut to promote growth of riparian vegetation and upland ground cover.

DESCRIPTION of MITIGATION MEASURES and RESIDUAL IMPACTS:
In stream work will be completed based on the Oregon Department of Fish and Wildlife in water work guidelines. Oil absorbing booms will be placed downstream during in water work introduction of fuel and oil into the stream is a possibility.

Minimize backhoe trips to and from rock source. Minimize movement of rock from rock source to stream in riparian areas.

Limit backhoe travel in riparian and meadow areas as much as possible. Limit backhoe use to

the bottom of talus slopes where possible.

Backhoe travel in the uplands should only occur when the ground is dry or frozen.

If gouging in the stream from the backhoe occurs, rehabilitate the site.

Site access will be maintained, such that cross country travel to the site does not create a way that is drivable by the public.

Disturbed and/or exposed soil will be revegetated.

Water gaps will be provided for livestock access to water to minimize grazing impacts and improve distribution. Location of the watergap has been coordinated with the allotment permittee and was placed to facilitate livestock movement and minimize stream bank impact.

Juniper management areas will be well delineated with leave trees well marked. Old growth forms of juniper will not be cut.

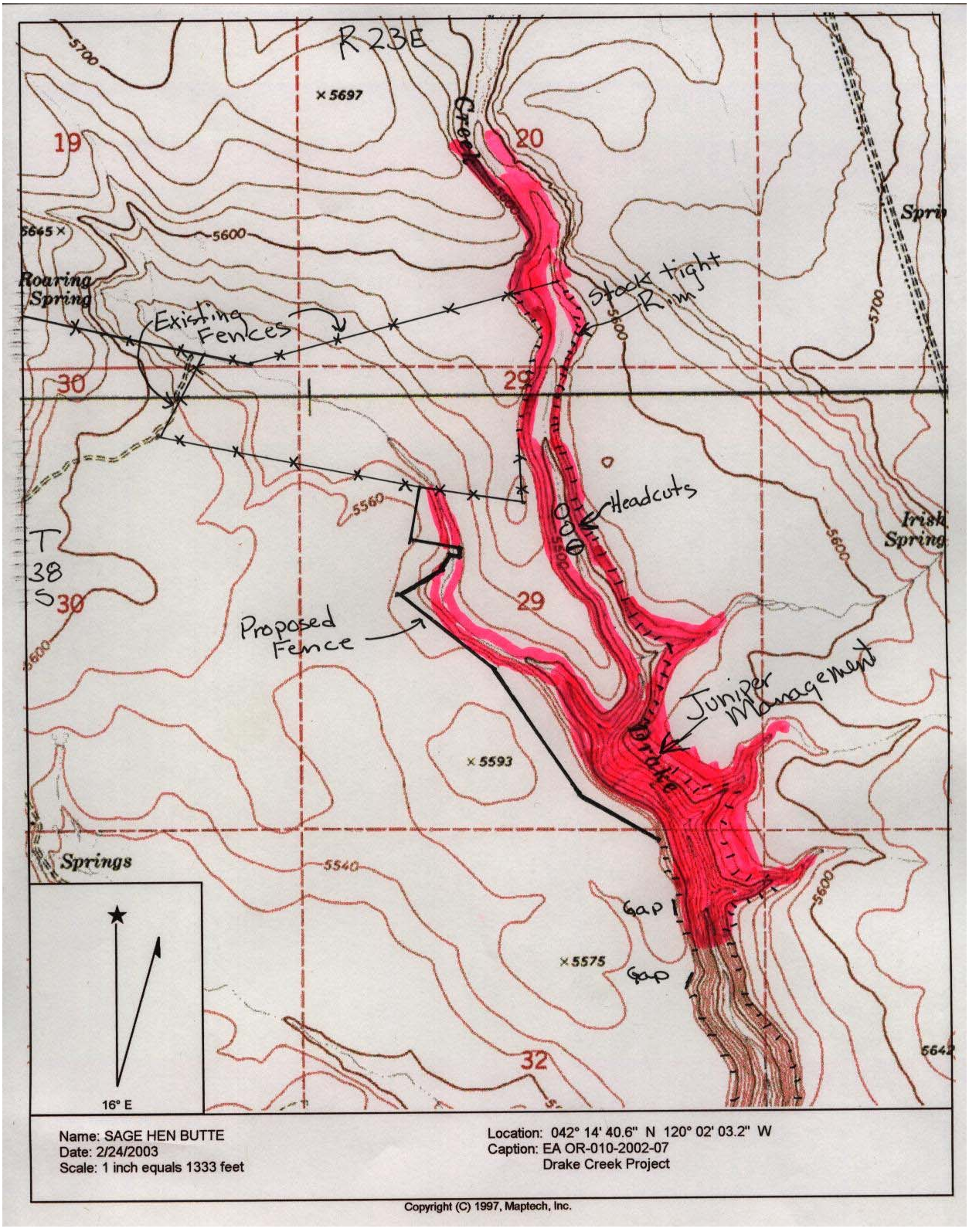
NOXIOUS WEED CONSIDERATIONS:
Equipment, including ATVs, back-hoes and other vehicles entering the site, will be cleaned before entry to sites. Seed, mats and mulches used in head-cut control will be certified weed free. The project sites will be monitored and treated for weed invasion for three years after work is completed. Prior to work, known weed sites will be treated to minimize spread potential.

PERSONS/AGENCIES CONSULTED:

Curtis Edwards	Fisheries Biologist	ODFW
Craig Foster	Wildlife Biologist	ODFW
Tom Lane	Allotment Permittee	

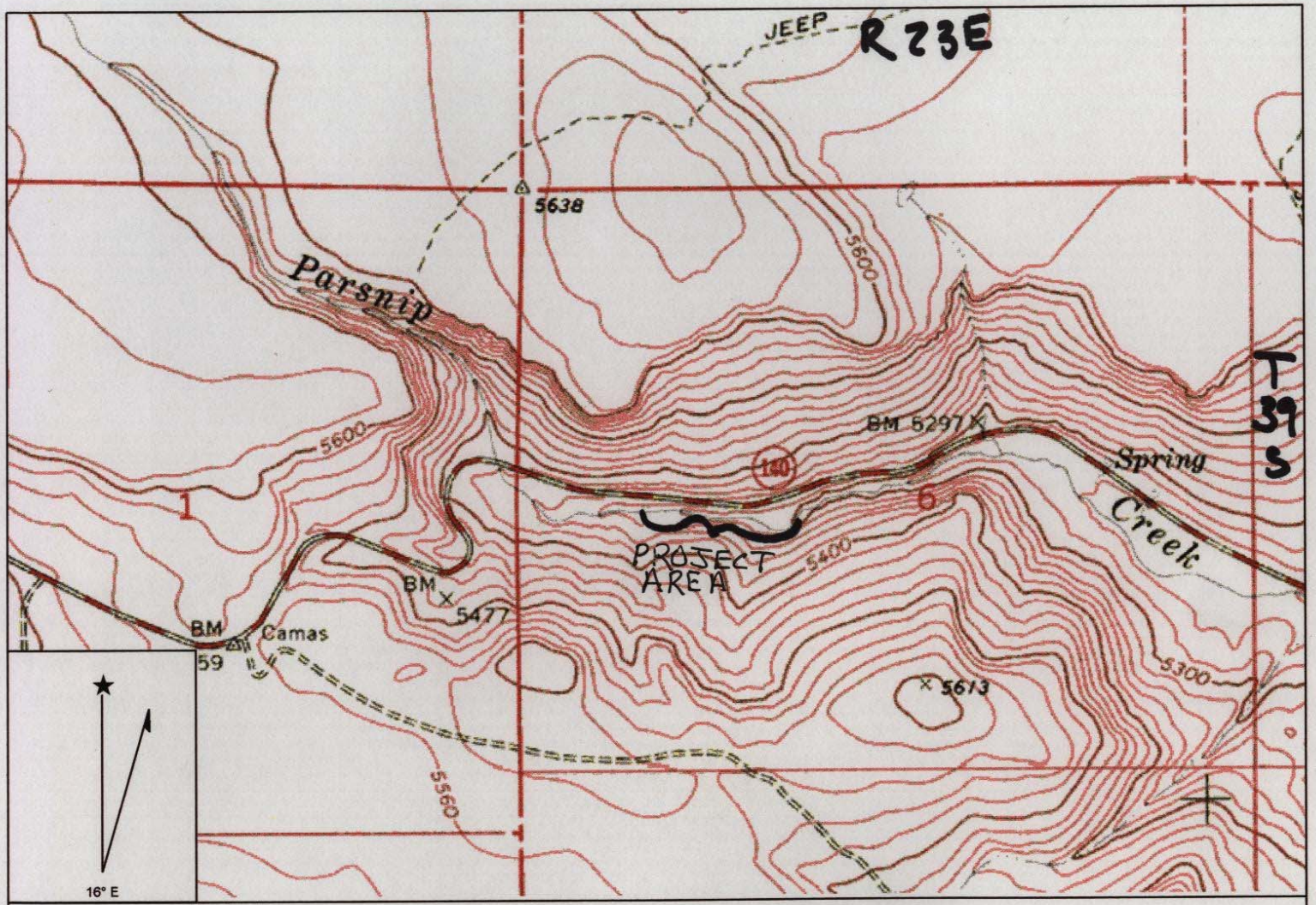
PREPARER(S):

Ken Kestner	Natural Resource Specialist
William Cannon	Archeologist
Trish Lindaman	Park Ranger
Alan Munhall	Team Lead
Philip Blythe	Fuels Specialist
Barbara Machado	Hydrologist
Elizabeth Berger	Hydrologist



Name: SAGE HEN BUTTE
Date: 2/24/2003
Scale: 1 inch equals 1333 feet

Location: 042° 14' 40.6" N 120° 02' 03.2" W
Caption: EA OR-010-2002-07
Drake Creek Project



Name: SAGE HEN BUTTE
Date: 3/21/2003
Scale: 1 inch equals 1000 feet

Location: 042° 12' 57.2" N 120° 03' 28.1" W
Caption: Parsnip Headcut control